

WHAT IS CLAIMED IS:

1. Flexible ejector for injection molds, of the type meant to make small negatives of the injected part to be obtained, and of those having a rod provided with means of attachment to the ejector plate, which through a flat and elastically deformable neck ends in a small header which incorporates a material recess, of a shape and size matching that of the negative area of the part to be obtained characterized in that said header (3), with the exception of the material recess (4) which corresponds to the negative to be obtained and which is variable depending on the configuration of said negative, adopts a rectangular prismatic shape, that is, with faces which are parallel by pairs in order to simplify its matching.

2. Flexible ejector for injection molds, according to claim 1, characterized in that the diagonal length of the section of the header (3) is equal to or smaller than the diameter of the rod (1), so that it allows to both introduce the ejector in its housing from the ejector plates (9-9') towards the inside of the mold, and to obtain the machining of the ejector from a market-available rod.

3. Flexible ejector for injection molds according to claim 1, characterized in that the rod (1) presents an end segment (10) which is externally threaded in order to attach the ejector with the aid of a screw (11) which allows a precision adjustment of the axial position of its header (3) with respect to the body (7) of the mold during the molding stage.

4. Flexible ejector for injection molds according to claim 2, characterized in that the rod (1) presents an end segment (10) which is externally threaded in order to attach the ejector with the aid of a screw (11) which allows a precision adjustment of the axial position of its header (3) with respect to the body (7) of the mold during the molding stage.

5. Flexible ejector for injection molds according to claim 3, characterized in that said screw (11) is housed between two ejector plates (9-9'), specifically in a housing (12) of the latter one, and is immobilized after it is regulated with the aid of a silicone gasket (13) or any other suitable means.

6. Flexible ejector for injection molds according to claim 4, characterized in that said screw (11) is housed between two ejector plates (9-9'), specifically in a housing (12) of the latter one, and is immobilized after it is regulated with the aid of a silicone gasket (13) or any other suitable means.

7. Flexible ejector for injection molds according to claim 1, characterized in that the rod (1) presents in its externally threaded segment (10) a small flat facet in correspondence with one of its generator lines, in order to immobilize the ejector in an angular sense, while allowing it to move freely in an axial sense, with the aid of key (14) also provided between the ejector plates (9-9'), preferably on the ejector plate (9) which does not receive the screw (11).

8. Flexible ejector for injection molds according to claim 2, characterized in that the rod (1) presents in its externally threaded segment (10) a small flat facet in correspondence with one of its generator lines, in order to immobilize the ejector in an angular sense, while allowing it to move freely in an axial sense, with the aid of key (14) also provided between the ejector plates (9-9'), preferably on the ejector plate (9) which does not receive the screw (11).

9. Flexible ejector for injection molds according to claim 3, characterized in that the rod (1) presents in its externally threaded segment (10) a small flat facet in correspondence with one of its generator lines, in order to immobilize the ejector in

an angular sense, while allowing it to move freely in an axial sense, with the aid of  
5 key (14) also provided between the ejector plates (9-9'), preferably on the ejector  
plate (9) which does not receive the screw (11).

10. Flexible ejector for injection molds according to claim 5, characterized in  
that the rod (1) presents in its externally threaded segment (10) a small flat facet in  
correspondence with one of its generator lines, in order to immobilize the ejector in  
an angular sense, while allowing it to move freely in an axial sense, with the aid of  
key (14) also provided between the ejector plates (9-9'), preferably on the ejector  
plate (9) which does not receive the screw (11).

11. Flexible ejector for injection molds according to claim 1, characterized in  
that between the header (3) and the body (7) of the injection mold is provided a  
housing for a bushing (15), suitably attached to the body (7) of the mold such as with  
a screw (16), so that it is in this bushing (15) where the housing and passage (8) is  
5 provided for the header (3) of the ejector, with a perfect adjustment to the latter and  
with a smooth sliding of the same.

12. Flexible ejector for injection molds according to claim 2, characterized in  
that between the header (3) and the body (7) of the injection mold is provided a  
housing for a bushing (15), suitably attached to the body (7) of the mold such as with  
a screw (16), so that it is in this bushing (15) where the housing and passage (8) is  
5 provided for the header (3) of the ejector, with a perfect adjustment to the latter and  
with a smooth sliding of the same.

13. Flexible ejector for injection molds according to claim 3, characterized in  
that between the header (3) and the body (7) of the injection mold is provided a

housing for a bushing (15), suitably attached to the body (7) of the mold such as with a screw (16), so that it is in this bushing (15) where the housing and passage (8) is provided for the header (3) of the ejector, with a perfect adjustment to the latter and with a smooth sliding of the same.

14. Flexible ejector for injection molds according to claim 5, characterized in that between the header (3) and the body (7) of the injection mold is provided a housing for a bushing (15), suitably attached to the body (7) of the mold such as with a screw (16), so that it is in this bushing (15) where the housing and passage (8) is provided for the header (3) of the ejector, with a perfect adjustment to the latter and with a smooth sliding of the same.

15. Flexible ejector for injection molds according to claim 7, characterized in that between the header (3) and the body (7) of the injection mold is provided a housing for a bushing (15), suitably attached to the body (7) of the mold such as with a screw (16), so that it is in this bushing (15) where the housing and passage (8) is provided for the header (3) of the ejector, with a perfect adjustment to the latter and with a smooth sliding of the same.

16. Flexible ejector for injection molds according to claim 11, characterized in that both the housing for the bushing (15) of the body (7) of the mold and the orifices for passage of the rod (1) in ejector plates (9-9') are cylindrical and perpendicular to said elements, which simplifies both their machining and the installation of the ejector in the corresponding mold.

17. Flexible ejector for injection molds according to claim 12, characterized in that both the housing for the bushing (15) of the body (7) of the mold and the

orifices for passage of the rod (1) in ejector plates (9-9') are cylindrical and perpendicular to said elements, which simplifies both their machining and the installation of the ejector in the corresponding mold.

18. Flexible ejector for injection molds according to claim 13, characterized in that both the housing for the bushing (15) of the body (7) of the mold and the orifices for passage of the rod (1) in ejector plates (9-9') are cylindrical and perpendicular to said elements, which simplifies both their machining and the installation of the ejector in the corresponding mold.

19. Flexible ejector for injection molds according to claim 14, characterized in that both the housing for the bushing (15) of the body (7) of the mold and the orifices for passage of the rod (1) in ejector plates (9-9') are cylindrical and perpendicular to said elements, which simplifies both their machining and the installation of the ejector in the corresponding mold.

20. Flexible ejector for injection molds according to claim 15, characterized in that both the housing for the bushing (15) of the body (7) of the mold and the orifices for passage of the rod (1) in ejector plates (9-9') are cylindrical and perpendicular to said elements, which simplifies both their machining and the installation of the ejector in the corresponding mold.